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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,104	01/18/2002	Chul-Hwan Choi	SEC.890	6556

7590 11/24/2003
VOLENTINE FRANCOS, P.L.L.C.
Suite 150
12200 Sunrise Valley Drive
Reston, VA 20191

EXAMINER

BRAHAN, THOMAS J

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,104

Applicant(s)

CHOI ET AL.

Examiner

Thomas J. Brahan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 6-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. Claims 4 and 6-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected species. Applicant's election with traverse of the restriction in Paper No. 5 is acknowledged. The traversal is on the grounds that the species are similar in nature as to have a single search. This is not found persuasive because the seven different species are distinct from each other and include features which would expand the search. The requirement is still deemed proper and is therefore made FINAL.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Yonemitsu et al. Figure 13 of Yonemitsu et al shows a semiconductor device manufacturing equipment comprising:

a transfer chamber (55);

a plurality of working chambers (701 and 300), at least some of the working chambers being disposed one above the other at one side of the transfer chamber, the working chambers being respectively connected to the transfer chamber independently of each other; and

a robot (60) disposed in the transfer chamber, the robot including at least one robot arm, the at least one robot arm having a working range that encompasses the plurality of working chambers such that the robot can transfer wafers between respective ones of the working chambers via the transfer chamber.

The working chambers comprise a plurality of process chambers (701) and a plurality of load lock chambers (300) with first and second doors (91 and 92) as recited in claim 2. At least some of the process chambers (701) are disposed one above the other at one side of the transfer chamber (the left side as seen in figure 13) and at least some of the load lock chambers (300) at disposed at the other side of the transfer chamber (the right side) as recited in claim 3. A number of the process chambers (701) are disposed side-by-side above one another, and on one side of the transfer chamber, as recited in claim 5.

4. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Muka. Muka shows a semiconductor device manufacturing equipment comprising:

a transfer chamber (32);

a plurality of working chambers (26-31), at least some of the working chambers being disposed one above the other at one side of the transfer chamber, the working chambers being respectively connected to the transfer chamber independently of each other; and


a robot (34) disposed in the transfer chamber, the robot including at least one robot arm (articulated arm 56/58), the at least one robot arm having a working range that encompasses the plurality of working chambers such that the robot can transfer wafers between respective ones of the working chambers via the transfer chamber.

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The working chambers comprise a plurality of process chambers (26-29) and a plurality of load lock chambers (30 and 31) with first and second doors (38 and 40), as recited in claim 2. The embodiment of figures 5A and 5B has the process chambers (102) disposed one above the other at one side of the transfer chamber and the load lock chambers (108) are disposed one above the other at the other side of the transfer chamber (the left side), as recited in claim 3. Both embodiments have a number of the process chambers disposed side-by-side above one another, and on one side of the transfer chamber, as recited in claim 5.

5. Konishi et al is cited as showing a similar processing apparatus with stacked load locks and processing chambers. Tabrizi et al and Kimura show similar processing systems.

6. Any inquiry concerning this communication should be directed to Thomas J. Brahan at telephone number (703) 380-2568. The examiner's supervisor, Eileen Lillis, can be reached at (703) 308-3248. The new fax number for patent applications is (703) 872-9306.

 11/7/03
Thomas J. Brahan
Primary Examiner
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